



STATEMENT OF CORPORATE INTENT

2017-18



POWERING THE NT



POWER GENERATION CORPORATION
trading as
Territory Generation

2017-18 Statement of Corporate Intent

CONFIDENTIAL

April 2017



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Glossary

Acronym	Meaning
CIPS	Channel Island Power Station
CPI	Consumer Price Index
DLNG	Darwin Liquefied Natural Gas
EBIT	Earnings Before Interest and Tax
EBITDA	Earnings Before Interest, Tax, Depreciation and Amortisation
ELT	Executive Leadership Team
FTE	Full Time Equivalent
GCC	Generation Consultative Committee
GOC	Government Owned Corporation
GWh	Gigawatt-hour
HR	Human Resources
IR	Industrial Relations
IT	Information Technology
KCPS	Kings Canyon Power Station
KPI	Key Performance Indicator
KPS	Katherine Power Station
KRA	Key Result Area
LGCs	Large-scale Generation Certificates
LMS	LMS Landfill Management Services Pty Ltd (Shoal Bay)
LNG	Liquefied Natural Gas
LTI	Lost Time Injury
M	Million
MST	Mobile Services Team
MW	Megawatt
MWh	Megawatt-hour
NPAT	Net Profit After Tax
N-2	Planning for the generation system to withstand the loss of the 2 largest single units in any region
NT	Northern Territory
NTEM	Northern Territory Electricity Market
OMT	Operator Maintenance Technician
OSPS	Owen Springs Power Station
PGC Act	Power Generation Corporation Act 2014
PPA	Power Purchase Agreement
PWC	Power and Water Corporation
R&M	Repairs and Maintenance
RECs	Renewable Energy Certificates
ROC	Remote Operations Centre
RGPS	Ron Goodin Power Station
RoA	Return on Assets
RoE	Return on Equity
SCADA	Supervisory Control And Data Acquisition
SCI	Statement of Corporate Intent
TCPS	Tennant Creek Power Station
WAN	Wide Area Network
WEM	Wholesale Electricity Market
WLF	Women's Leaders Forum
WHS	Workplace Health and Safety
WPS	Weddell Power Station
YPS	Yulara Power Station

1 Executive Summary

Overview

Territory Generation (T-Gen) is a Government Owned Corporation (GOC) and commenced operations on 1 July 2014 out of the restructure of the electricity industry in the Northern Territory.

T-Gen is the largest electricity producer in the Northern Territory, owning 583MW of installed capacity and contracting an additional 32MW from Independent Power Producers for supply to our customers.

T-Gen produces more than 1900GWh of electricity per year using gas, diesel and solar technologies to power the Territory's major population centres and towns.

This document is T-Gen's third Statement of Corporate Intent (SCI) which builds on the foundations outlined in its original SCI reflecting the long term strategic direction of the business.

This direction remains largely unchanged, however due to ongoing progress towards changing its core operating model and also the need to respond to changing external factors, there has been increased emphasis in some areas, particularly with our approach to renewable energy.

This will become increasingly evident towards the end of 2017 and expectations will shift towards potential growth opportunities in the years 2018 onward as the new operating model starts to take shape.

By the end of 2017, significant upgrades to its asset fleet, particularly in the Southern region, will be complete and the new Remote Operations Centre will be operating all sites.

The culmination of these significant projects means that in effect, this SCI heralds the end of an Old World operating model and the active transition to a more Contemporary Model.

Our vision

To be the trusted and respected employer and electricity generation business of choice.

Our business goal (purpose)

Safely, efficiently and reliably generate electricity to sustainably contribute to the lifestyle and development of the Northern Territory.

Our Renewable and Alternative Energy Vision

That the majority of T-Gen's base load supply to existing markets will be from renewable energy sources by 2030.

Our values

FIRST – Focus, Integrity, Respect, Safety and Teamwork

These values reflect our key intentions of T-Gen and its people:

- Safety will be universally recognised as the Corporation's highest priority.
- The business will be known for being reliable, efficient and available when required.
- The business will be a commercial organisation that is highly efficient and sustainable.
- The expectations of customers will be exceeded.
- The business will be competitive with other players in the market.
- The business will be an employer of choice.

Performance

T-Gen's performance since separation has exceeded expectations, highlighted by the following overview of key strategic developments. These are provided in greater detail in Section 5:

- The business successfully separated from Power and Water Corporation (PWC) and operates independently. The foundations are now in place for its own stand-alone, fit for purpose IT systems and business processes.
- Embarked on an organisation-wide Transformation Project to transition to a new operational business model by the end of 2017, involving key focus areas of:
 - Upgrade of the Tennant Creek and Owen Springs Power Stations, with a total investment of \$101 million to further improve reliability, efficiency and safety.
 - Establishment of a Remote Operations Centre (ROC).
 - Design and implementation of key enabling WAN networks, data systems and unified communications.
 - Introduction of an Operator Maintenance Technician (OMT) model.
- Due to business value created through these initiatives, there is scope to reduce wholesale prices in these regions in the future and will also see a reduction of CO2 emissions in these markets by approximately 20 per cent.
- Completed T-Gen's first draft *Renewable and Alternative Energy Strategy* in September 2016:
 - *"The majority of T-Gen's base-load electricity supply in each of its existing markets will be from renewable energy sources by 2030"*.
- Implemented a root and branch review of safe systems of work processes including permit to work and contractor safety management systems.
- The business' first wholesale pricing schedule was released to customers for implementation on 1 July 2015 and included a significant price reduction for the Darwin/Katherine region. This price will remain flat in nominal terms until June 2018 which reflects the Corporation's confidence that it can achieve planned cost efficiencies.
- Financial performance in the first two years of operation has been solid and key financial targets have been met, underscored by positive external audit outcomes.
- A short term gas supply agreement was executed with PWC until 2018, with work underway toward establishing a Long Term Gas Supply Agreement.
- Continued progress with the development and implementation of a number of key strategic initiatives identified to enhance efficiency and reliability of core business operations.
- Board endorsed an organisational structure enhancement, which will see a sharp focus on delivery of T-Gen's growth projects, including renewables and alternative technologies under the new functional area, **New Energy and Sustainability**.

Other key ongoing achievements in the past two years include:

- Continuing record of 438+ days without a single-contingency under-frequency load-shed event in the Darwin/Katherine system, significantly greater than previous records.
- Improved reliability due to improved asset management and maintenance, equipment upgrades, improved system monitoring, as well as co-ordination with Power and Water Corporation's System Control.
- Engine upgrade program occurred in Katherine on time and budget.
- Electronic Permit system rolled out at Channel Island Power Station (CIPS) and Weddell Power Station (WPS).
- All plant available going into Wet Season 2016-17.
- Moved into new headquarters.
- Implementing enhanced "Safe Systems of Work" to improve safety.
- Regional Managers, Employee and Union representatives continue to meet regularly.
- A number of constructive GCC meetings held as part of ongoing consultation on changes to operational business model.
- Increased emphasis on internal communications.
- Board meetings held at all operational sites at least once per year.
- Providing an increased focus on nurturing skills and promoting diversity.

**Detailed information on these projects is available in section 5 as well as in the Annual Report*

Forecast / Strategic Intent

The 2017/18 SCI represents the final report within the first three-year SCI reporting period that was outlined at its inception and reaffirms T-Gen's journey toward achievement of the vision that commenced at its embryonic stages. The key drivers of change occurring in the external business landscape include the impending development of a new wholesale electricity market, significantly reducing forecast demand in all regions due to increased penetration of rooftop and industrial/commercial solar installations, as well as Utility-scale new entry. This continues to pose a significant threat to the business and its commercial performance.

The electricity industry is undergoing significant and rapid change globally and also locally in the Territory. The combination of the size of the market, competition, rapid change within the industry and technology are all playing a part in directly affecting T-Gen's performance and future.

All the current data suggests this will occur within in a short time frame – as early as 2021.

In response, T-Gen must continue to:

- Become more efficient so we are competitive and can withstand the threat posed by disruption of technology as well as any future competitors.
- Secure our future and take control of our own destiny.
- Keep up with the rapid moves globally toward a renewable energy future.
- Make an adequate financial return for our shareholders.

The need to change is not driven solely by competition. T-Gen has a responsibility to its stakeholders (including the shareholder, customers and the community) to produce electricity as efficiently and reliably as possible.

In doing so, our focus is about “*getting the balance right*” with replacing existing aging machinery and technology with new, state-of-the-art, world-first renewables, ensuring adherence to three key principles:

- 1. Reliability**
- 2. Cost**
- 3. Sustainability**

The key challenges faced by T-Gen in achieving our strategic financial objectives are:

- Decreasing energy sales from traditional markets due to increasing penetration of roof top and industrial/commercial solar installations combined with the end user focussing on energy efficiency.
- Uncertainty in regard to fuel pricing in the medium to long term. Fuel costs currently represent approximately 60% of T-Gen's operating costs.

There are six Key Result Areas (KRAs) that define the vision and provide objectives to achieve within the first five years, being Safety, Finance, Customers, Sustainability, Internal Processes and People and Culture. *Detailed breakdown of these can be found in the Strategic Intent section.*

In addition, T-Gen has responsibilities as the generator of last resort in the Northern Territory, which adds significant capital and operational costs to the business. These responsibilities include carrying spinning reserve, as well as the provision of the full range of ancillary services together with the provision of sufficient redundant capacity in all markets to ensure security of continuous operation of the electricity system.

All of this carries with it significant risk due to the current volatile nature of the electricity industry, the significant operational change being undertaken and the size of the NT market – this document outlines T-Gen’s strategic approach to mitigating those risks.

Actions

A number of actions have been identified for 2017/18 that will collectively deliver the outcomes required to achieve the objectives above. The key actions include the following:

- Finalise review and improvement of safety management processes and documentation.
- Develop and implement a financial training program for all managers to achieve greater accountability.
- Renegotiate and restructure bilateral retail contracts and gas supply agreement.
- Unbundle the components of the customer bill including the ancillary services cost.
- Develop a dedicated function to evaluate new business models, technologies and innovation.
- Develop internal technical capability across renewable energy technologies.
- Implement the Remote Operations Centre and consolidation of new operating model.
- Implementation of a sustainability framework and reporting system.

A high level implementation plan has been developed for every action to identify key activities, timing and resource requirements, and these plans will be reviewed periodically to monitor progress.

Risks

T-Gen recognises that risk is an integral component of our business and corporate governance. We foster a risk-aware corporate culture in decision-making through the application of high quality, integrated risk analysis and management.

Some of the key strategic risks to the business include IT security, workplace injury or death, technology disruption, competition, market rules and gas supply failure. These risks are addressed with specific actions that are designed to decrease the residual rating to a level that is as low as reasonably possible.

2 Introduction

Power Generation Corporation (the Corporation) trading under the business name Territory Generation, was established on 29 May 2014 under the *Power Generation Corporation Act 2014* (PGC Act).

The Corporation is a Government Owned Corporation (or GOC) under the *Government Owned Corporations Act* (GOC Act). In accordance with the GOC Act, the Corporation's board of directors (Board) is:

- responsible for the operation of the Corporation; and
- accountable to the shareholding Minister for the performance of the Corporation.

Territory Generation's Board is required to provide an agreed SCI each financial year under section 39 of the GOC Act.

Section 40 of the GOC Act provides that the SCI must specify, in respect of the financial year to which it relates and each of the two following financial years, the following information:

- the objectives of the Corporation;
- the nature and scope of the activities to be undertaken by the Corporation;
- the material risks faced by the Corporation;
- the strategies to minimise the material risks faced by the Corporation;
- the strategies to improve the financial performance of the Corporation;
- the capital investment plans of the Corporation that have been approved by the Government Owned Corporation's shareholding Minister;
- the financial targets and other measures by which the performance of the Corporation may be judged;
- the accounting policies to be applied in the accounts of the Corporation; and
- any other matter that may be agreed on by the shareholding Minister and Territory Generation's Board of Directors.

3 Overview of the Corporation

3.1 Overview

3.1.1 History

Territory Generation (T-Gen) was established under the PGC Act and a new Board was formed on 29 May 2014. By way of transfer regulations made under the GOC Act, the assets were transferred from Power and Water Corporation (PWC) to T-Gen, and operations commenced on 1 July 2014, with the CEO appointed on 21 July 2014.

The structural separation of PWC's monopoly and contestable businesses into three standalone GOCs forms part of the Territory Government's reform program that is designed to remove inefficiencies and more effectively restrain costs and prices in the Territory's electricity supply industry.

To this end, the reform program seeks to improve the competitive environment for the generation, supply and sale of electricity by establishing a range of pro-competitive measures.

As they relate to T-Gen, the current reforms are designed to provide for more effective and accountable management of the Government owned power generation business, and improve incentives for the business to operate efficiently and sustainably.

3.1.2 Assets

Territory Generation owns and operates the following generation facilities:

Region/Location	Engines	Total (MW)	Description
Darwin Region			
<i>Channel Island</i>	8 turbine sets (gas/diesel) and 1 heat recovery steam turbine	310.0	Channel Island Power Station (CIPS) is the largest power station in the Northern Territory and the main source of electricity for the Darwin - Katherine Interconnected system. The first units were commissioned at CIPS in 1986, and Channel Island now has 310MW of installed capacity. CIPS is a natural gas fired station, with diesel fuel back-up capability.
<i>Weddell</i>	3 turbine sets (gas)	129.0	The Weddell Power Station (WPS) connects to the Darwin - Katherine grid and consists of two open cycle gas turbines commissioned in 2008, with a third unit commissioned in 2014.
<i>Katherine</i>	4 turbine sets (gas/diesel)	34.7	The Katherine Power Station has been operational since 1987. The station contains four open cycle gas turbines.
Alice Springs Region			
<i>Ron Goodin</i>	8 reciprocating sets (2 diesel, 6 gas/diesel); 1 turbine (gas/diesel)	44.6	The Ron Goodin Power Station was commissioned in 1973. <i>*NB – Once the new engines at OSPS are online by end 2017, RGPS will be decommissioned</i>
<i>Owen Springs</i>	3 reciprocating sets (gas/diesel), 1 turbine (gas/diesel) <i>*NB – 10 new 4.1MW gas engines arrived Feb 2017 but not included in this table</i>	36.0*	The Owen Springs Power Station uses the latest dual fuel reciprocating technology. With the majority of the capacity commissioned in 2011, Owen Springs Power Station services the Alice Springs community. Following the completion of the expansion project the total capacity will rise to 77MW.
Other regions			
<i>Tennant Creek</i>	11 reciprocating sets (5 gas, 6 diesel) and 1 turbine (gas/diesel). <i>*NB - 3 new 2MW gas engines arrived Oct 16</i>	16.7	The Tennant Creek Power Station (TCPS) services the Tennant Creek township, and surrounding communities as far as Ali Curung, 150km south of Tennant Creek.
<i>Yulara</i>	10 reciprocating sets (4 gas, 5 diesel, and 1 gas and diesel)	11.0	The Yulara Power Station is the only commercial source of electricity in the Yulara area, servicing the Ayers Rock Resort.
<i>Kings Canyon</i>	3 reciprocating sets (diesel), plus 250 kw of solar generation	1.2	The Kings Canyon Power Station is the only commercial source of electricity in the Kings Canyon area, servicing the Kings Canyon Resort and domestic customers.
TOTAL - owned	57 sets	583.2	
TOTAL generation	including PPAs	615.0	

Asset location

The stylised map below shows the locations of T-Gen’s key power station assets and related gas supply infrastructure.



In summary, T-Gen is well underway with its program to renew its ageing asset fleet with the \$101 million investment in major power station upgrades at Alice Springs and Tennant Creek. This is expected to further improve reliability, efficiency, performance monitoring and safety.

The commissioning of new plant in Alice Springs will ultimately see the closure of Ron Goodin Power Station and will address many of the legacy issues regarding uniformity of the type of plant and equipment. Some of these issues still exist across the asset fleet, which ultimately has implications of efficiency and maintenance synergies.

A significant proportion of T-Gen's existing generation portfolio will require replacement in the next 10-15 years and one of the key issues and projects to be managed under the sustainability and new energy banner will be the development and implementation of an integrated asset replacement program.

3.1.3 Power Purchase Agreements (PPAs)

T-Gen has three PPAs with third parties, as follows:

- *Uterne* - Uterne is a solar power station owned by Uterne Power Plant Pty Ltd located in the Alice Springs region. The power station has 4.1MW of solar generating capacity.
- *Pine Creek* - the Pine Creek power station is located in the Darwin/Katherine region and is owned by EDL NGD Pty Ltd. The power station has 26.6MW of combined cycle natural gas generating capacity. A new PPA contract was entered into in 2016.
- *LMS Shoal Bay* - the LMS Shoal Bay power station is located at Shoal Bay in the Darwin/Katherine region and it is owned by Landfill Management Services Pty Ltd. The power station has 1.1MW of landfill gas generating capacity. The PPA contract was renewed in 2016.

The PPA contracts are subject to confidentiality agreements so details cannot be disclosed.

3.1.4 Gas Supply

T-Gen has a three-year gas supply contract with PWC which concludes on 30 June 2018. The Corporation is currently seeking to negotiate a long term gas supply agreement with PWC for supply beyond this date.

PWC also supplies emergency gas through its contract with DLNG and T-Gen pays for this gas as required.

The key strategic implications arising from the current gas portfolio are as follows:

- The cost of delivered gas is the most significant cost driver for the business.
- The Corporation continues to work towards optimising its long term gas supply.

3.2 External Analysis – Stakeholders

Stakeholder	Our View of Their Wants/Needs
The Shareholder (representing Territorians)	<ul style="list-style-type: none"> • Constantly improving reliability, efficiency and availability of plant. Safe working environment. • Lowest cost of supply to consumers in the long run. They expect the Corporation to embrace and facilitate the electricity reforms. • Reasonable return on their investment for the risk taken. • Transparency of costs and performance. • Security of supply within a balanced context of a move toward renewables.
Customers (retailers)	<ul style="list-style-type: none"> • Transparent and ‘fair’ pricing. • Longer term certainty of pricing. • Flexibility. • T-Gen to facilitate competition in the retail market (i.e. assist, but not favour, all retail participants including potential new entrants).
Key suppliers (gas, equipment manufacturers, contractors)	<ul style="list-style-type: none"> • Continuity of mutually beneficial work and clarity of roles (i.e. build closer, longer term relationships). • Certainty of demand / requirement for products and services.
Market (regulators, System Control, PPA parties, market implementation committee)	<ul style="list-style-type: none"> • The wholesale market to be operational as soon as possible. T-Gen needs to contribute and participate for it to be effective. • Positive contribution to market design. • Improved communication.
Potential Competitors	<ul style="list-style-type: none"> • Despite supply significantly exceeding demand in the medium term in the Darwin-Katherine grid, there is a threat of new entry by both utility scale and rooftop solar.
Unions	<ul style="list-style-type: none"> • Maintain job security, wages and conditions. • Openness and engagement delivering success through strong partnerships.

3.3 Sustainable Competitive Advantages

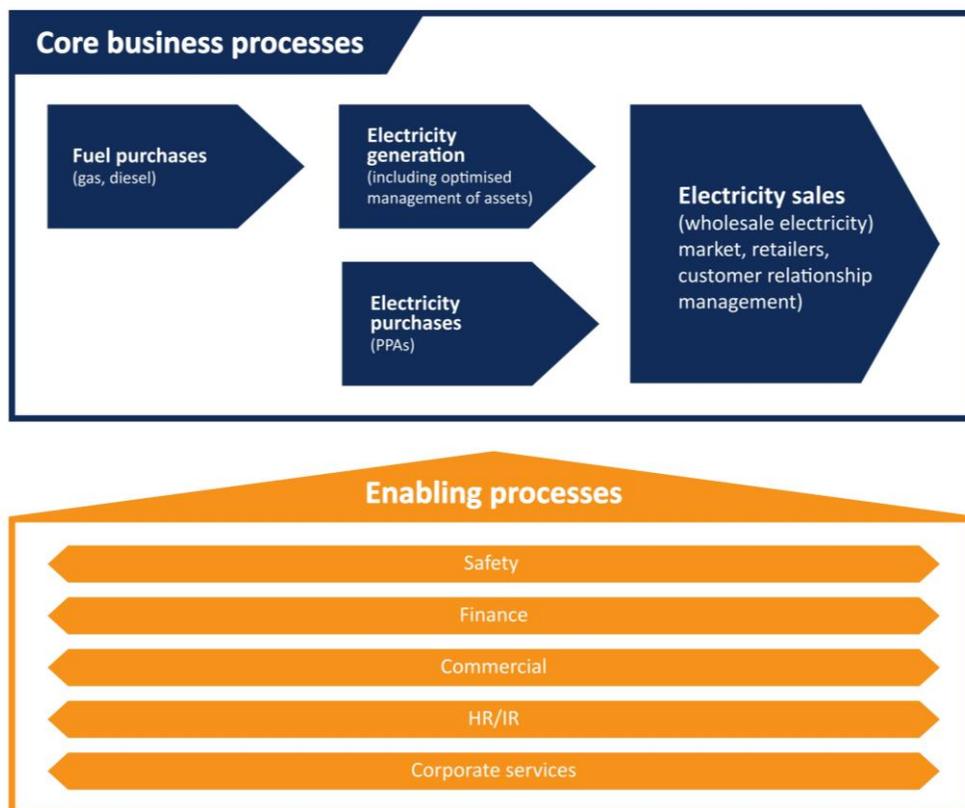
Sustainable competitive advantages are defined as long term in nature and not easily replicated by potential competitors. It is important to understand the key things that are unique to the business because they will assist with defining how the business will compete in the future and also identify potential growth areas.

Key competitive advantages are:

- The experience and capability of successfully working in remote, small systems/networks and regions that have significant renewable energy penetration.
- In addition, staff are adaptable, flexible and innovative in their approach to working in areas with harsh environmental conditions (both tropical and desert).
- We have established a strong plan for growth into the renewable energy sector.
- Significant GE Frame 6 gas turbine and large reciprocating engine generator experience.
- Based on the door-step of the fast growing South East Asian region which provides opportunities for future potential growth aligned with the other competitive advantages.

3.4 Business Model

The diagram below summarises the key processes within the business, how they relate to each other, and ultimately how the business earns revenue and derives a commercial return.



In its simplest form, T-Gen’s business involves procuring fuel to generate electricity from its own power stations and procuring electricity from PPA partners in order to sell it to retailers.

The enabling processes span the entire business and support and underpin the core business processes.

4 Market Analysis

4.1 Market Structure

T-Gen operates in three independent regulated systems, being Darwin/Katherine, Alice Springs and Tennant Creek, and two non-regulated systems, Yulara and Kings Canyon.

Total peak demand (MW) and energy sent out (MWh) in each of the regulated systems in 2015/16 is presented in the table below:

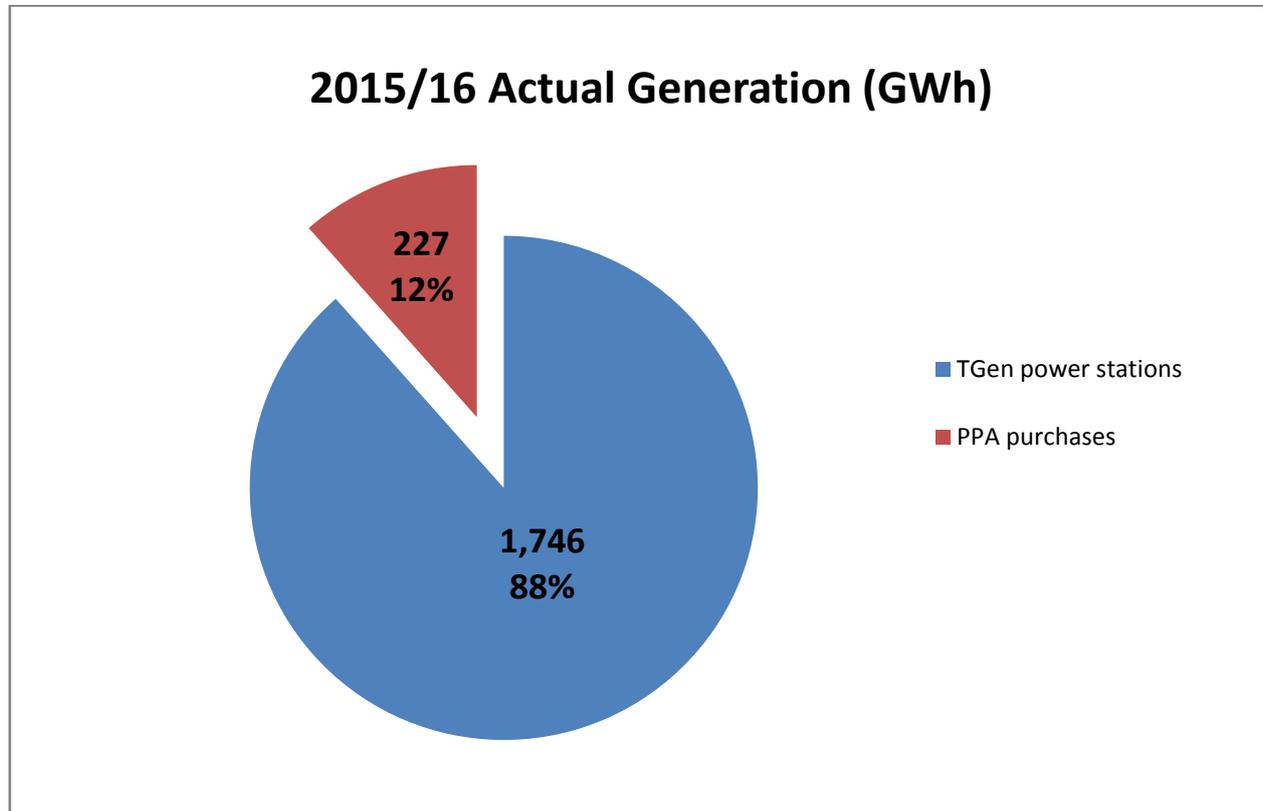
System/Market	Peak Demand		Total Sent Out Volume 2015/16 (GWh)
	2015/16 (MW)	As a percentage of Total System Capacity	
Darwin/Katherine	294.19 (290.2 in 2014/15)	58%	1,671 (1,599 in 2014/15)
Alice Springs	52.98 (51.1 in 2014/15)	57%	212 (216 in 2014/15)
Tennant Creek	6.73 (6.9 in 2014/15)	40%	29 (30 in 2014/15)

Currently, T-Gen provides 100% of the electricity purchased, by Retailers, in the regulated network, either by its generation fleet or through Independent Power Producers (IPP) supplying to T-Gen through Power Purchase Agreements (PPA). T-Gen then sells electricity through bilateral contracts to licenced electricity retailers. Current customers include:

- Jacana Energy
- Power and Water Retail
- QEnergy
- Rimfire Energy

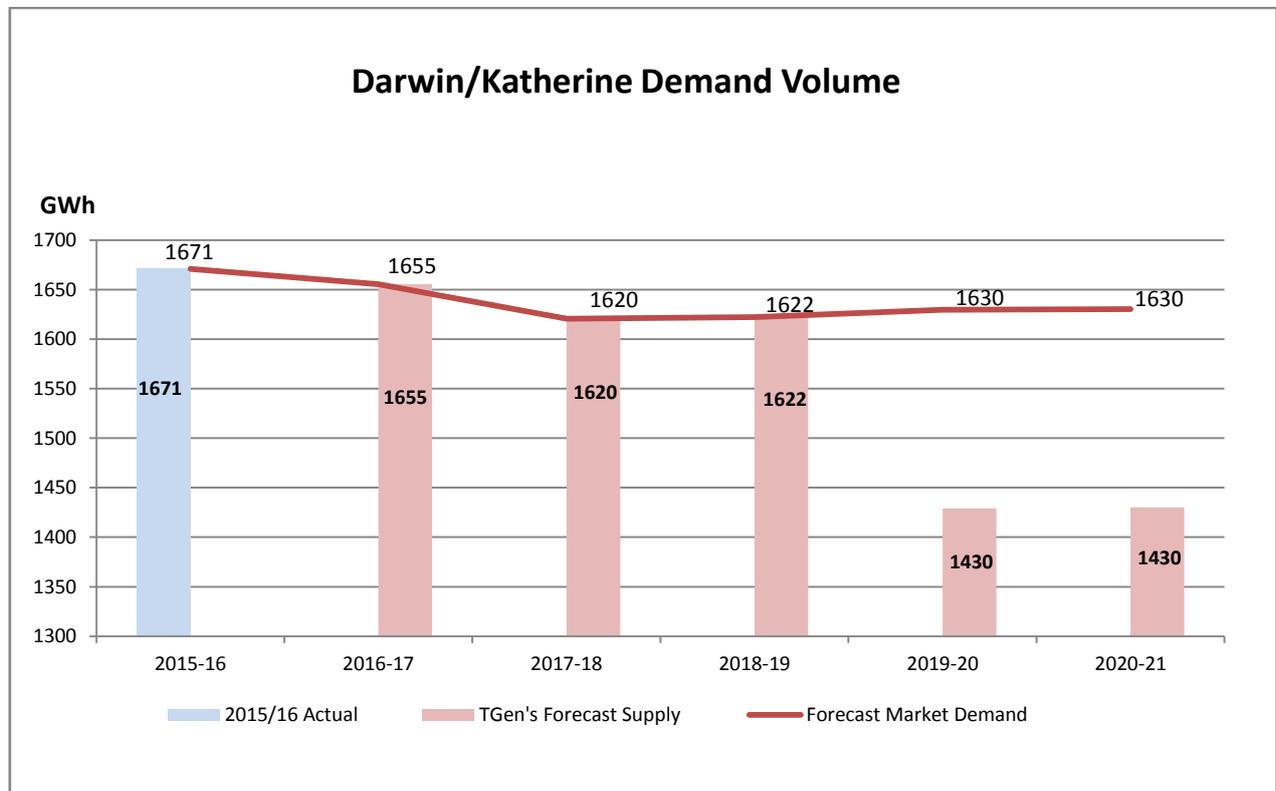
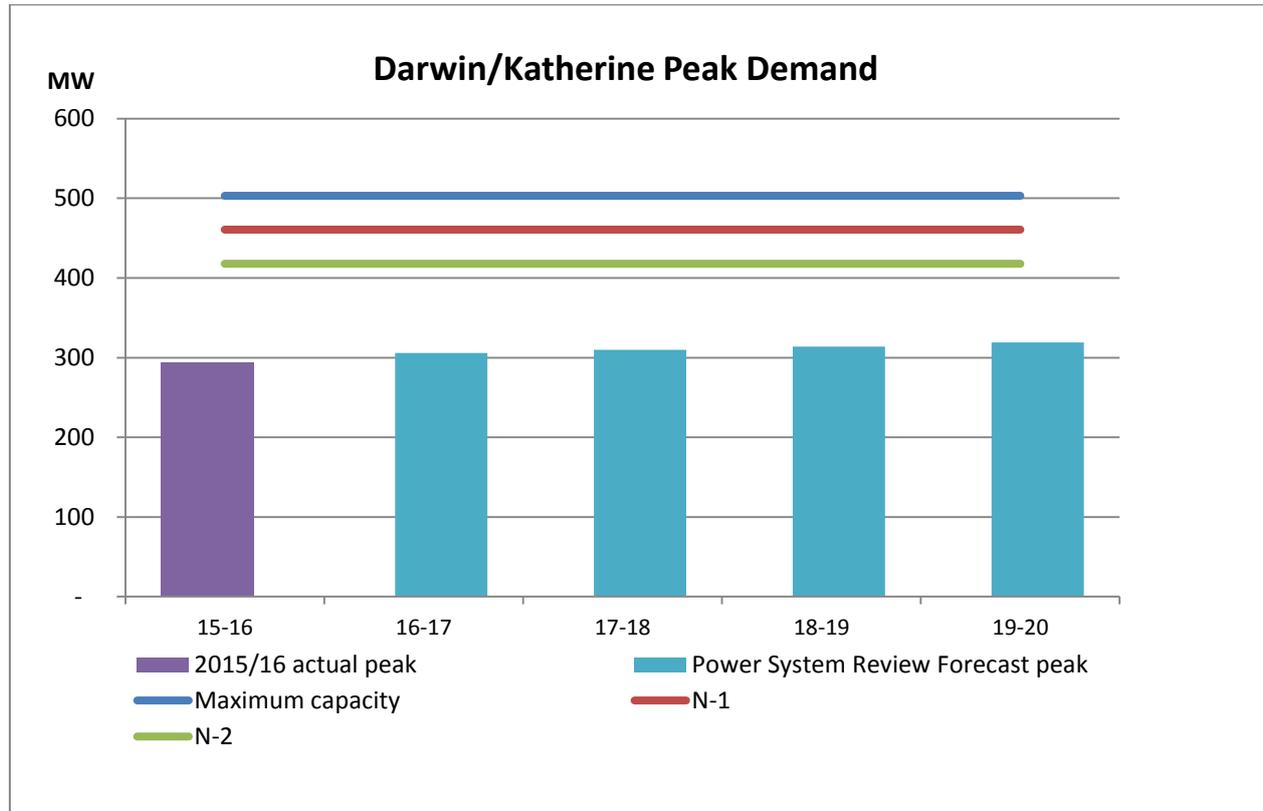
Total Market Generation

The following diagram shows the split of 2015/16 total NT energy volume generated by power stations owned by the business and that purchased under PPA contracts:

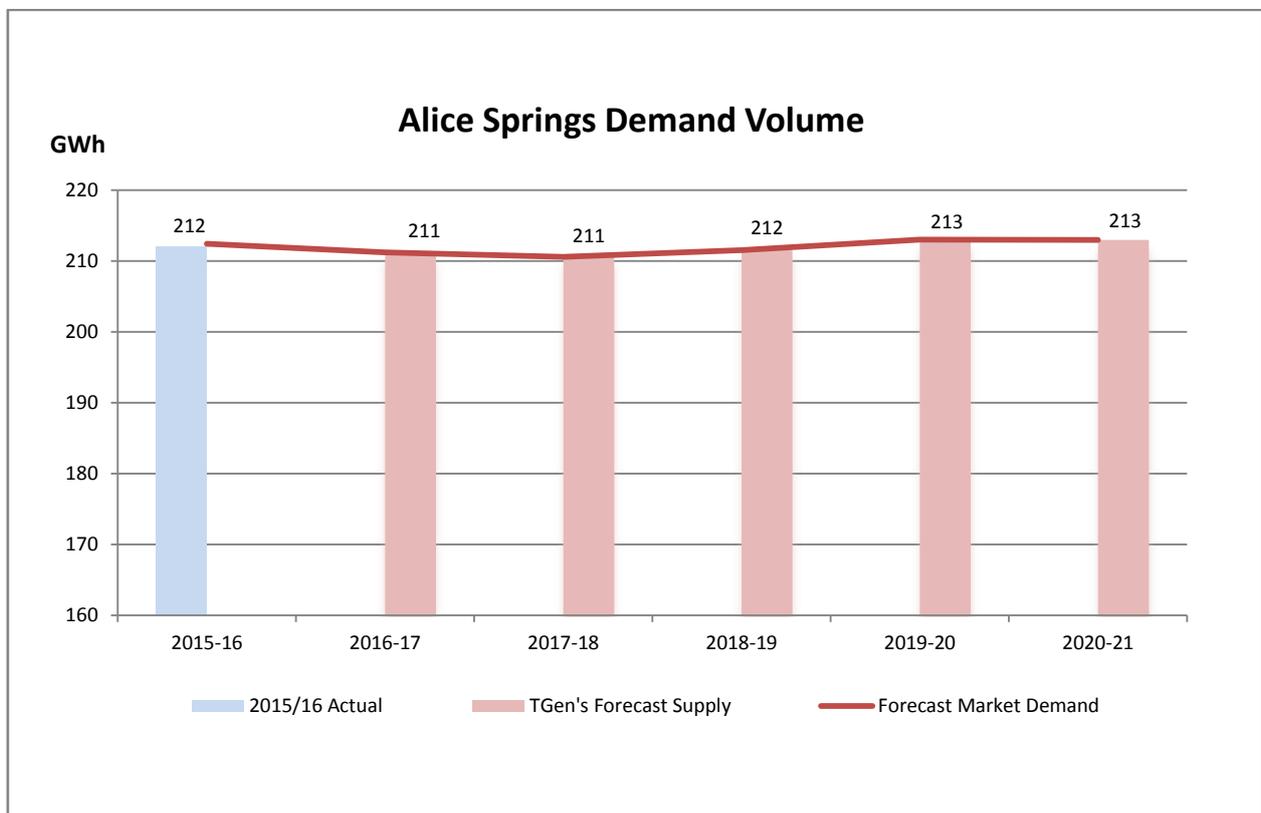
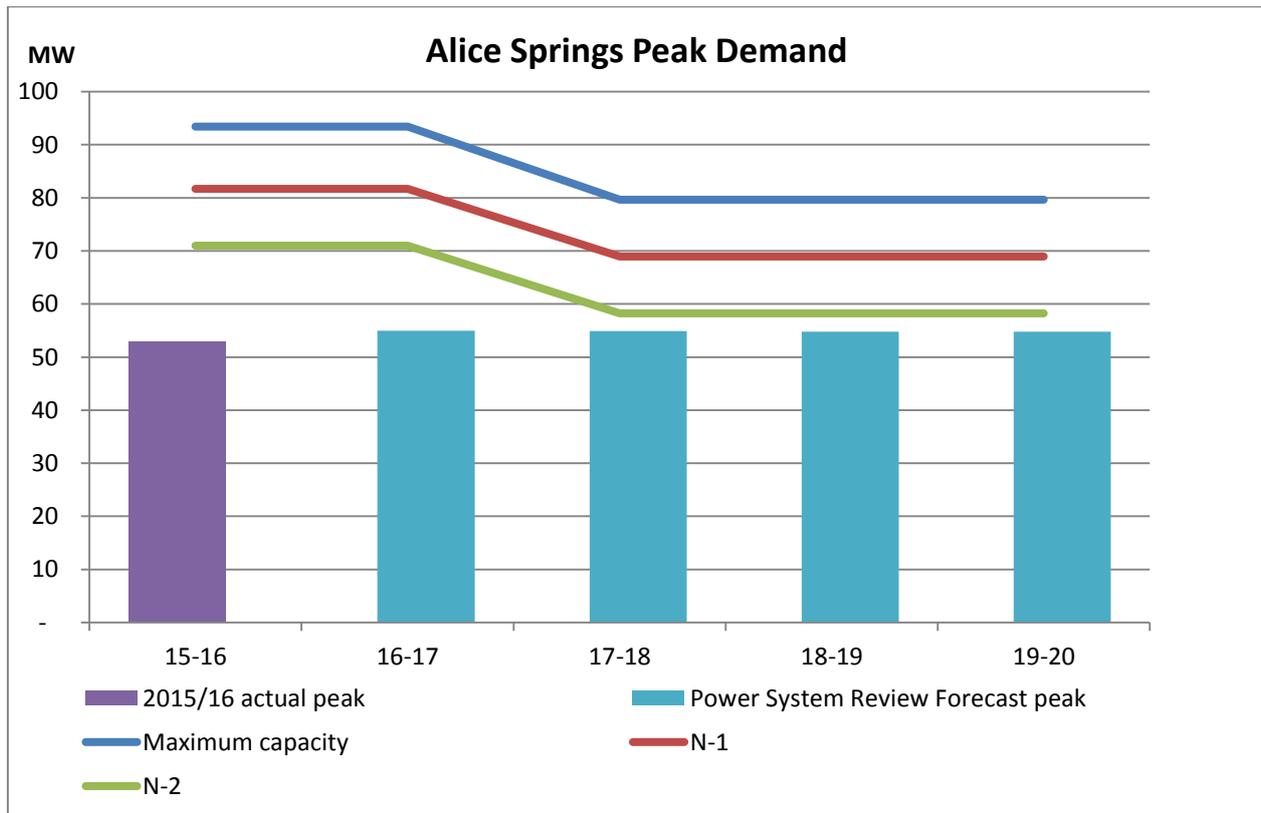


The diagrams on the following pages show the projected demand, sourced from the 2014/15 Power System Review published by the Utilities Commission, and supply balance for the three key regions of Darwin/Katherine, Alice Springs and Tennant Creek over the SCI period for both energy and peak demand.

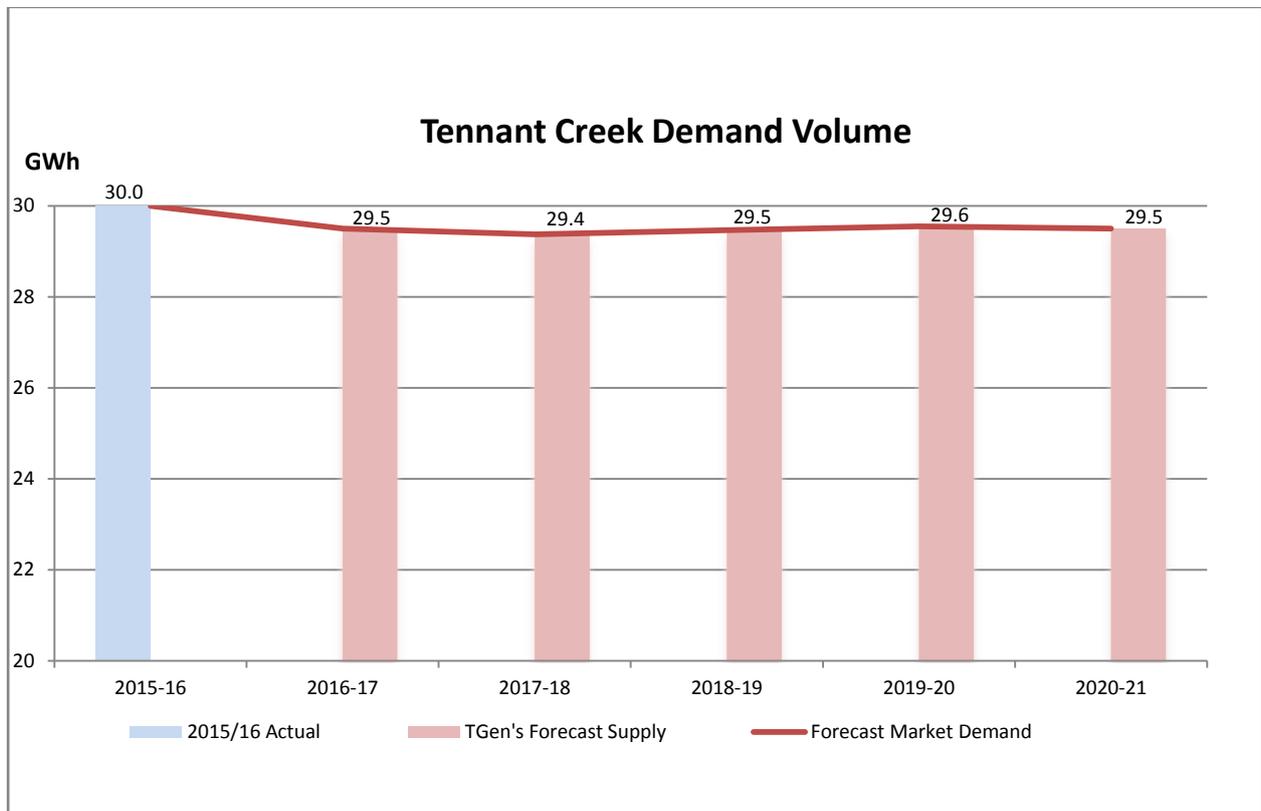
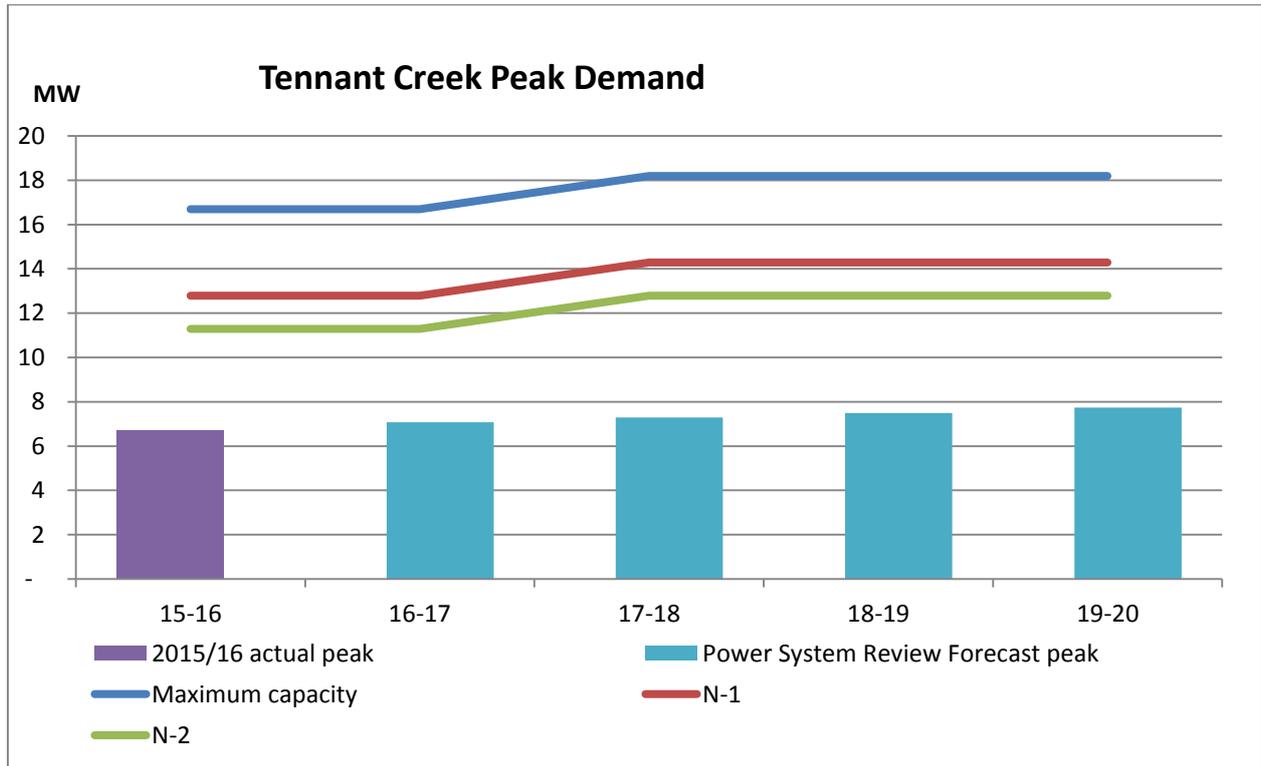
Darwin/Katherine System



Alice Springs System



Tennant Creek System



Summary

- These graphs highlight that even under 'N-2' generation redundancy assumptions, peak demand can be met from the existing supply configuration in all regions.
- Average total demand volume is projected to be flat whilst peak demand is expected to rise marginally.
- The lack of growth in demand volume from the grids can be attributed to the projected increase in solar installations both in rooftop PV and commercial scale PV.
- The projected total demand volume in the Darwin/Katherine region steadily declines from mid-2016 as Inpex construction concludes and the project transitions to the operational phase.
- The reserve capacity on gas is higher in Tennant Creek than would normally be expected due to the inclusion of a 4MW Taurus dual fuel generator to meet the fuel redundancy requirements for diesel operation.

4.2 Market Mechanisms

The Territory Government endorsed the adoption of a wholesale electricity market arrangement (to initially apply in the Darwin Katherine power system) to replace the current reliance on bilateral contracts between T-Gen and the retailers with a physical market as part of a package of electricity market reforms. The recommended market design, termed the Northern Territory Electricity Market (NTEM), is a two part market comprised of an energy trading mechanism and a capacity (investment) mechanism.

The design is intended to facilitate cost effective and secure dispatch of electricity while providing investment certainty to government and private-sector industry participants. To support the secure dispatch of electricity generation requires the development of frameworks to cater for procurement and payment for ancillary services and network congestion.

Currently, T-Gen provides additional services in the Territory, which add significant capital and operational costs to the business. These services include the provision of ancillary services such as spinning reserve, frequency control, system inertia and system black start capability, as well as sufficient backup fuel capacity in all markets. The impact and cost of these additional services is bundled into T-Gen's wholesale energy tariffs. This is a legacy of the former vertically-integrated utility structure of the electricity sector.

The interim trading arrangement (I-NTEM) commenced in May 2015 and represents a pragmatic and transitional approach to ensure the costs do not outweigh the benefits in implementing an interim wholesale electricity market. The I-NTEM is also an important step in understanding the issues around developing a full market. ^

The Department of Treasury and Finance has established a working group, at the time of writing the current focus was on unbundling ancillary services and developing the relevant regulatory and commercial processes to enable this.

[^] *Strategy for Northern Territory Utilities, Department Of Treasury And Finance, 22 June 2016*

4.3 Implications of Market Analysis

The key strategic implications arising from the market are as follows:

- There is no single agreed energy demand forecast for the sector.
- The Darwin/Katherine market continues to have more than sufficient capacity including redundancy to meet peak demand and no new capacity is required in the market for the SCI period.
- Increasing penetration of rooftop and industrial/ commercial solar installations, as well as Utility-scale new entry generation which continue to pose a significant threat to the business and its commercial performance and is a key driving force behind T-Gen focussing on becoming more efficient and cost competitive.
- T-Gen is the only participant in the I-NTEM. This involves daily generator bidding and dispatch correspondence with the power system controller, contribution as a member of the broader stakeholder group to the development of the market rules and structure, and developing the internal systems and processes required to operate in the market.
- The wholesale market structure is still in development and the final structure will impact on T-Gen's strategic positioning moving forward and the explicit pricing of services.
- T-Gen expects to see improvements in efficiencies as the power system controller focuses on the development of market mechanisms including economic dispatch, clarity of ancillary services and capacity requirements and related cost implications.
- The capture, analysis and reporting of key operational and market data is critical for future success and this continues to evolve and develop over time.

5 Review of Prior Year

During November and December 2016, the business conducted a review of the current Strategic Plan which included a series of workshops with the Senior Management Group, Executive Leadership Team and Board.

The conclusions drawn from the review confirmed that the KRAs and targets remain the same and a number of new initiatives have been identified and planned for delivery in 2017-18. (*ref. section 6.6*)

The new plan recognises the continuation of actions commenced in 2016-17 which will carry over and responds to the challenges and opportunities presented by rapid technological change in renewable energy.

Some of the key initiatives that are referenced in this SCI have been achieved over the past two years and are listed below:

- The business successfully separated from Power and Water Corporation (PWC) and operates independently. The functional transformation objective identified in Year 1 has been successfully implemented and the business now has its own stand-alone, fit for purpose IT systems and business processes.
- Embarked on an organisation-wide Transformation Project to transition to a new operational business model by the end of 2017, involving key focus areas of:
 - **Upgrade of the Tennant Creek and Owen Springs Power Stations**, with a total investment of \$101 million to further improve reliability, efficiency and safety. A total of 7.5MW of new plant arrived in Tennant Creek late October 2016 and new engines arrived at the Owen Springs Station in February 2017, representing 41MW of new capacity. The commissioning of new plant in Alice Springs will ultimately see the closure of Ron Goodin Power Station.
 - **Establishment of a Remote Operations Centre (ROC)**. The ROC is scheduled to be operational for the Alice Springs power stations in June 2017 and for all T-Gen's power stations by December 2017. It will centralise the dispatch, operation and monitoring of all T-Gen power generation assets. An unmanned backup location will be established at Owen Springs Power Station for use during emergencies. The ROC represents a growth opportunity for T-Gen, with potential to service future customers wherever they might be located.
 - **IT Enablers**. Design and implementation of key enabling WAN networks, data systems and unified communications. This project is delivering significant benefits to the entire organization but is particularly targeted at ensuring the ROC operates at maximum efficiency and effectiveness.
 - **Introduction of an Operator Maintenance Technician (OMT) model** to expand the Operating Model currently utilised at some existing sites. This is expected to optimally align our resourcing with the ROC, as well as maintenance requirements of the new power stations. It is also designed to create staff development opportunities.
- Due to business value created through these initiatives, there is scope to reduce wholesale prices in these regions in the future and will also see a reduction of CO2 emissions in these markets by approximately 20 per cent.
- Implemented a root and branch review of safe systems of work processes including permit to work and contractor safety management systems.

- Board approved T-Gen’s draft *Renewable and Alternative Energy Strategy* in September 2016 and is working to align with the broader NTG strategy with its Renewable Taskforce prior to its release in 2017. Our vision is:
 - *“The majority of T-Gen’s base-load electricity supply in each of its existing markets will be from renewable energy sources by 2030”.*
- Board endorsed an organisational structure revamp, which will see a sharp focus on delivery of T-Gen’s growth projects, including renewables and alternative technologies under the new functional area, **New Energy and Sustainability**.
- Financial performance in the first two years of operation has been solid and key financial targets have been met. The business’ financial systems and processes have been well established and are robust, which has been underscored by a positive external audit outcome.
- A short term gas supply agreement was executed with PWC. A longer term agreement is still to be finalised and this presents a significant risk as it is the most significant input cost for the business.
- Good progress has been made with the development and implementation of a number of key strategic initiatives identified to enhance efficiency and reliability of core business operations. This is a significant priority due to increasing penetration of rooftop and industrial/commercial solar installations as well as Utility-scale new entry which continues to pose a significant threat to the business and its commercial performance. This work is ongoing.
- As at the last event on Sunday 19 November 2016 we set a record of 438 days without a single-contingency under-frequency load-shed event in the Darwin/Katherine system. Previous record was 273 days and prior to that was 121 days.
- Engine upgrade program occurred at Katherine Power Station (KPS) on time and budget.
- Electronic Permit system rolled out at Channel Island Power Station (CIPS) and Weddell Power Station (WPS).
- All plant available going into Wet Season 2016-17.
- Moved into new headquarters.
- Implementing “Safe Systems of Work” to improve safety.
- Regional Managers, Employee and Union representatives continue to meet regularly to discuss further opportunities for improvement.
- A number of constructive Generation Consultative Committee (GCC) meetings held as part of ongoing consultation on changes to operational business model.
- Increased emphasis on communications, with regular weekly video communications linking up all sites and CEO and Executives regularly visiting all sites.
- Board meetings held at all operational sites at least once per year providing a constructive two way dialogue between Board and front line employees.
- Providing an increased focus on nurturing skills and promote diversity, both internally with the establishment of a Women Leaders Forum as well as a new Engineering scholarships with CDU and Engineers Australia with focus on indigenous and female participation.

For further detail regarding performance and the year in review, refer to T-Gen’s Annual Report.

6 Strategic Intent

6.1 Vision

Territory Generation’s vision is:

To be the trusted and respected employer and electricity generation business of choice.

T-Gen has carefully defined the meaning of its vision statement as follows:

Trusted and respected	<ul style="list-style-type: none"> • Safety will be universally recognised as the highest priority. • We will be known for being reliable, efficient and available when required. • Our proven capability and reliability will create confidence with our stakeholders to the extent that we will be given an opportunity to participate in the next new major additional generation plant required in the Northern Territory. • We will ensure that our market pricing and structure is transparent and open.
Electricity generation	<ul style="list-style-type: none"> • Our core business is the generation and sale of electricity.
Business	<ul style="list-style-type: none"> • We will be a commercial organisation that is highly efficient and sustainable. • Best practice and efficient systems and processes that enable us to deliver high quality services.
Of Choice	<ul style="list-style-type: none"> • We will exceed the expectations of our customers. • We will be competitive with other players in the market. • We will be an employer of choice.

6.2 Mission/Purpose

T-Gen’s purpose is to:

Safely, efficiently and reliably generate electricity to sustainably contribute to the lifestyle and development of the Northern Territory.

6.3 New Energy and Sustainability

The most significant addition to T-Gen's future strategic vision occurred in August 2016 with the finalisation of its renewable and alternative energy vision:

"The majority of T-Gen's base-load electricity supply in each of its existing markets will be from renewable energy sources by 2030".

Base-load electricity supply is defined as being the provision of electricity under normal operating conditions to meet customer demand. It does not include the provision of back-up or contingency energy supply or the provision of ancillary services.

The vision is the cornerstone of T-Gen's *Renewable and Alternative Energy Strategy* which is scheduled for release later in 2017, coinciding with the NT Government's broader Renewable Energy Strategy.

Based on high-level demand and supply analysis, the target is feasible assuming suitable technology is available and commercially viable.

T-Gen has developed a road map to achieve the vision based on:

- Developing capability and understanding of renewable technologies;
- Trialling small-scale standalone and integrated renewables to develop and prove a range of technologies and assess opportunities;
- Transferring the learnings to large-scale installations.

We aim to achieve this vision through a combination of replacement of existing plant when it reaches the end of its economic life, the addition of new plant to meet future peak demand requirements, and the potential substitution of existing plant where new technology is economically more efficient.

A significant proportion of T-Gen's existing generation portfolio will require replacement in the next 10-15 years. This presents an opportunity to deploy new renewable technologies before the 2030 timeframe. In doing so, our focus is about *"getting the balance right"*, ensuring adherence to three key principles:

- 1. Reliability**
- 2. Cost**
- 3. Sustainability**

In considering this approach, T-Gen is required to make commercial returns and its renewable energy strategy and subsequent implementation must meet these requirements.

Our customers are key stakeholders and they are seeking affordable electricity supply options in the long run. We are operating in a competitive market with the associated pressures in all regions to ensure our prices are efficient and in line with new entrants.

The combination of being a commercial entity, providing affordable electricity to customers, the threat posed by disruptive technology as well as any future competition, collectively means that T-Gen must invest in renewable technology on a commercially sustainable basis.

In recognising the importance of new energy development and sustainability to the future of T-Gen, the Board recently endorsed an organisational structure enhancement, which will see a sharp focus on delivery of T-Gen's growth projects, including renewables and the changes in technology under the functional area, **New Energy and Sustainability**.

One of the main roles of the unit will be carriage of our *Renewable and Alternative Energy Strategy*, building our internal capability in current and emerging Renewable Energy technologies and responsibility for developing T-Gen's sustainability framework and reporting systems.

Currently there are relatively few renewable technologies that can be economically deployed at the scale of T-Gen's operations or that meet the reliability, cost and sustainability requirements, particularly to deliver reliable energy supply 24 hours a day, all year round. Developing internal technical capability to research and develop partnerships with emerging technologies is a key enabler of T-Gen achieving our renewable and sustainability objectives.

The T-Gen Board has established Sustainability as one of its strategic objectives. A key action is to develop a Sustainability Report. The report will initially focus on T-Gen's environmental performance and developing a plan to reduce our CO₂ emissions specifically and our overall environmental footprint more generally. The focus will be progressively expanded in subsequent years. To assist develop and focus our sustainability objectives and actions, we are using the United Nations Sustainability Development Goals as a framework.

In preparation for future strategic planning rounds, management will also investigate the implications of adopting a carbon-neutral stance and how T-Gen supports sustainability more generally in the communities in which we operate in the NT.

Key issues and projects to be managed under the sustainability and new energy banner will be the development of an integrated asset replacement program, renewable energy development strategy, delivery of renewable projects and assistance with transformation of Yulara and Kings Canyon. In the SCI period T-Gen anticipates developing options for Yulara and Kings Canyon that deliver high penetration renewable energy solutions. The solutions developed for these sites will then be evaluated for their potential to be applied at larger scale particularly in the Darwin-Katherine markets

One of T-Gen's current renewable and alternative energy projects is the Alice Springs battery storage system, which will establish 5MW battery inverter system to assist with generation and network stabilisation and increase the capability for more solar PV penetration.

A relatively large amount of thermal spinning reserve is required to support solar intermittency and provide backup for other contingency events. This is inefficient, expensive and increases CO₂ emissions.

The Alice Springs battery storage project will trial the replacement of thermal spinning reserve through the use of a battery inverter system. This will have the benefits of reducing fossil fuel consumption, increased efficiency of generation plant, reduction of CO₂ emissions and improving the reliability of supply, whilst facilitating the entry of more intermittent renewable energy into the system.

A key strategy for this SCI period is to examine the options to increase the use of battery inverter and other storage technology across the Territory.

6.4 Values

Our Values	What this means	What we say / do
F OCUS	We focus our efforts on delivering a safe, reliable and cost efficient operation that we are all proud to be part of.	<p>We understand what is important to our success and we prioritise accordingly.</p> <p>We deliver considered and timely outcomes.</p> <p>We are competent in what we do and understand our roles.</p> <p>We take responsibility and accountability to deliver on our agreed objectives.</p> <p>We look for opportunities to improve everything we do.</p>
I NTEGRITY	We are open and honest with our words and actions "to say and do the right thing".	<p>We are trustworthy and honest.</p> <p>We take responsibility for our words and our actions.</p> <p>We do what we say we will do.</p> <p>We do the right thing and comply with all legislation and procedures.</p> <p>We challenge when our Values are not adhered to.</p>
R ESPECT	We show respect for our team mates, the environment, and the communities in which we work.	<p>We are professional in our interactions, offering trust and support and treating people the same way as we would like to be treated.</p> <p>We do not tolerate or ignore inappropriate comments or bullying.</p> <p>We respect other cultures and treat people equally, regardless of gender, age, nationality or religion.</p> <p>We treat our people, assets and finances respectfully, and comply with governing laws, regulations and company procedures.</p>
S AFETY	We conduct our business and our roles with a strong focus on avoiding injury or damage to assets and the environment. Safety is not negotiable.	<p>We recognise safety is first in everything we do.</p> <p>We take responsibility for ensuring our own safety and lookout for our workmates and others we work with as well.</p> <p>We do not walk past or ignore what is not safe.</p> <p>We adhere to safe work practices, processes and procedures.</p> <p>We ensure that safety is considered in our planning, our work and our actions.</p>
T EAMWORK	We are one team, with aligned goals working together to achieve Territory Generation's Vision.	<p>We listen and learn from alternate points of view, we work together to achieve the best outcome for the business, our employees and the community.</p> <p>We look for better ways to operate more efficiently and willingly share our ideas and information within the Territory Generation Team / business.</p> <p>We volunteer to help others as needed and we encourage each other to challenge the process to find a better way.</p>

6.5 Overview of Key Result Areas (KRAs) and Objectives

At the core of T-Gen’s comprehensive review of its strategic direction in 2015-16, was the establishment of a balanced scorecard of objectives, measures and actions.

Six key objectives were identified that define the achievement of its vision, to be met over a five-year period, as follows:

KRAs	Objectives (2015/16 to 2020/21)
Safety	<ul style="list-style-type: none"> We will have an embedded behavioural based safety culture, where safety is at the core of everything we do.
Finance	<ul style="list-style-type: none"> We will target a minimum average return on equity of 10% pa to our shareholder. We will target revenue from non-traditional sources will be a minimum of 5% of total revenue.
Customer & Growth	<ul style="list-style-type: none"> We will be known to be a trusted, reliable and competitive supplier, delivering quality products and services. We will have a diversified energy related product/service portfolio and customer base.
Sustainability	<ul style="list-style-type: none"> We will have a sustainability framework and reporting system that delivers corporate sustainability including environmental improvement. We will reduce our environmental footprint from 2015 normal operations levels by 5%.
Internal Processes	<ul style="list-style-type: none"> We will be efficient, sustainable and competitive in providing products and services that meet our customers’ needs.
People and Culture	<ul style="list-style-type: none"> We will have a corporate culture that attracts, retains and grows people aligned with T-Gen’s vision and values.

As we reach the half-way mark of this first Strategic Planning reporting period, the planning phases are all but complete; and the process of implementing has well and truly started.

This was evidenced in the Strategic Planning sessions in November 2016 when the focus was on “tweaking” the Strategic Plan rather than active additions.

Further Key Performance Indicators and Actions that define yearly movement across all these areas are included in the next section, however greater detail of individual projects and programs are contained in the Annual Report.

6.6 Overview of Key Performance Indicators (KPIs) and Actions

As outlined in the previous section, KPI measures have been developed to monitor performance toward achievement of the Corporation's objectives. Further, a number of strategic actions have been identified for each KRA that will be implemented over the course of the SCI period.

The table below is an overview of those key actions, however the Strategic Plan Objectives have detailed actions plans which provide the baseline for regular measurement of progress and continuous improvement toward key milestones.

The Strategic Plan Progress Update report is tabled and discussed at ELT meetings monthly and a Quarterly Strategy Review is conducted by the ELT and Senior Management Group to confirm action plans and consider the impacts of changes in the operating environment, including emerging risks and market developments.

Further detail is available in the Annual Report.

KRAs	KPI Measure	2017/18 Actions
Safety	<ul style="list-style-type: none"> • Safety cultural survey results 	<ol style="list-style-type: none"> 1. Review and improve safety management processes and documentation - identify, review, modify, implement 2. Implement Behavioural Based Safety strategy and performance measures
Finance	<ul style="list-style-type: none"> • ROE target • Total revenue from new sources 	<ol style="list-style-type: none"> 1. Develop and implement a financial training program for all managers 2. Develop and implement financial leadership module 3. Embed an improved level of management accountability and process of corrective actions and improvements 4. Negotiate a gas supply agreement
Customer & Growth	<ul style="list-style-type: none"> • Customer satisfaction survey • Trend benchmarked products/services prices • Number of new products and services • Number of new customer 	<ol style="list-style-type: none"> 1. Renegotiate and restructure bilateral retail contracts 2. Unbundling of all components of customer bill including ancillary services cost 3. Prepare a minimum of two growth business cases. 4. Develop a dedicated function to evaluate new business models, technologies and innovation

Sustainability	<ul style="list-style-type: none"> • tCO₂ equivalent emissions per annum. 	<ol style="list-style-type: none"> 1. Embed a corporate wide sustainability reporting framework and scorecard 2. Develop strategy to achieve Zero MW regulating reserve from fossil fuels 3. Implement instrumentation, data collection, storage and reporting systems to support the sustainability report framework
Internal Processes	<ul style="list-style-type: none"> • Operating expenditure as a percentage of total revenue. • Operating expenditure per MWh generated. 	<ol style="list-style-type: none"> 1. Implement the Remote Operations Centre 2. Implement process efficiency reporting - review of business need and data sources 3. Design and development of an Integrated Quality Management System 4. Renewable strategy: develop internal technical capability 5. Complete and implement IT Strategic Plan initiatives 6. Enhance outage and resource planning system capability 7. Supply Chain improvement project
People and Culture	<ul style="list-style-type: none"> • Employee survey. • Benchmark diversity against markets in which we operate. 	<ol style="list-style-type: none"> 1. Enterprise Agreement Planning 2. Consolidation of new operating model (including OMT, ROC, Gen Coordinators) 3. Develop appropriate and suitable employment models (incl review and improve on existing arrangements) 4. Develop graduate employment program 5. Enhance Health & Wellbeing Programs 6. Increase focus on diversity, through the Women Leaders Forum and scholarships/apprenticeships focussed on indigenous and female participation

7 Risk Management

7.1 Risk Management Process

T-Gen recognises that risk is an integral component of our business and corporate governance.

The Corporation fosters a risk-aware corporate culture in decision-making through the application of high quality, integrated risk analysis and management.

We are committed to managing all risks in a proactive and effective manner through standardised methodologies and processes based on AS/NZS ISO31000:2009 Risk Management Standard.

The Corporation has an enterprise wide risk framework which summarises all strategic risks into categories.

The risk assessment methodology is based on the likelihood of risk occurring and the potential risk consequences.

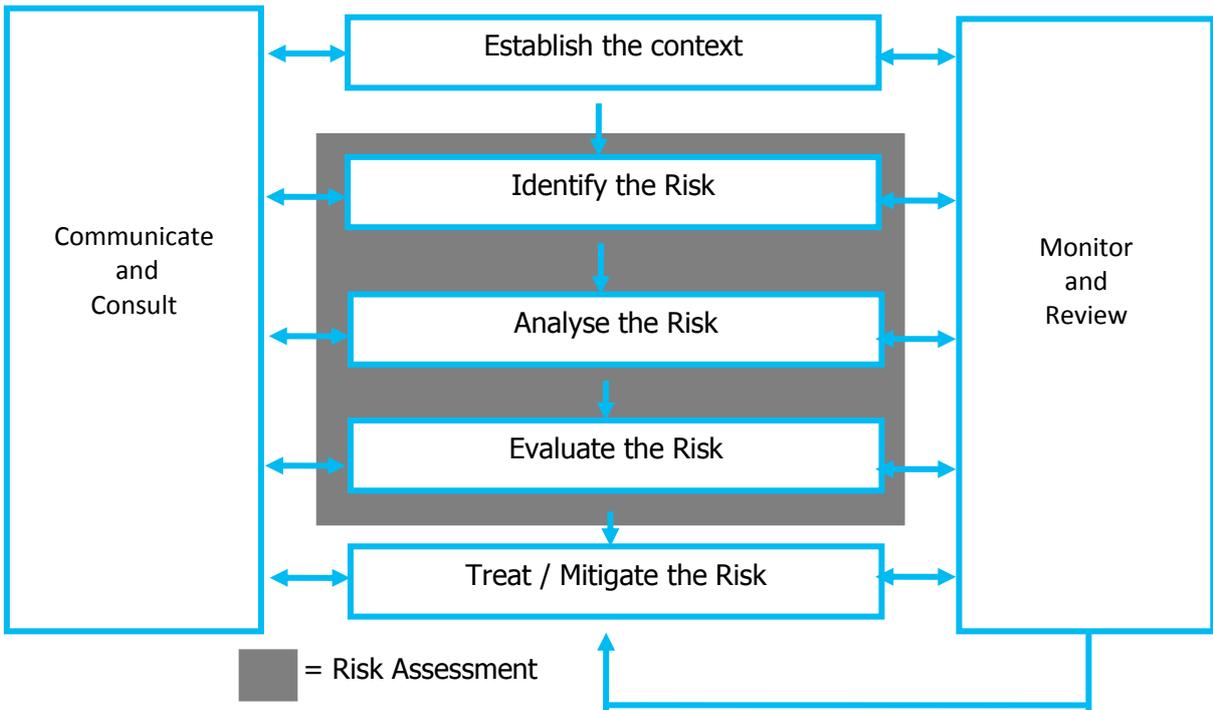
T-Gen business units manage their own operational risks and all risks are held and updated in the Risk Register, including ultimate Board oversight.

The register is provided to Executive Leadership Team and designated employees within each business unit. The register is available to all T-Gen employees on a view basis.

The risk framework is reviewed on a regular basis to ensure that it remains effective in the ongoing identification and management of risks. This includes being reported to the Audit and Risk Committee at each meeting and also to the Board on a quarterly basis.

Employees that become aware of a new risk or reassessment of an existing risk refer to the Risk Assessment guide for guidance on actions and reporting requirements.

The diagram below summarises T-Gen’s risk management process:



7.2 Strategic Risks

The table below summarises the four highest-rated strategic risks facing the business. All other risks are captured in the Risk Register.

Key Risk	Mitigation strategy	Residual Rating
IT security	<ul style="list-style-type: none"> ▪ Appointment of expert Cyber Risk advisors ▪ Project underway to deliver an agreed security level ▪ Network and system access controls ▪ Firewall and virus protection ▪ Audit of current systems and security measures ▪ Implementation of audit recommendations 	Extreme
Significant incident resulting in injury or death of a worker/visitor.	<ul style="list-style-type: none"> ▪ Continuous improvement program and safe systems of work project. ▪ Training and awareness programs including drug and alcohol program. 	Very High
Competition from utility scale generators and rooftop solar	<ul style="list-style-type: none"> ▪ Stakeholder engagement in the establishment of market design. ▪ Develop and implement strategies to react to market drivers. ▪ Investigation of growth options and alternative revenue streams. ▪ Renewable and Alternative strategy development. 	Very High
Market rules design put T-Gen at a commercial disadvantage via increased responsibility such as providing ancillary services and not being adequately compensated.	<ul style="list-style-type: none"> ▪ Stakeholder engagement in the establishment of market design. ▪ Ensure costs of providing these services are transparent. 	Very High

The residual rating is the rating of the risk assessed after the implementation of mitigation strategies.

We are in the process of implementing a suite of key actions that are designed to decrease residual ratings to a level that are as low as reasonably possible.

